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Interview with Mike Wilkenson

Mike Wilkenson

Utah State University

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Interview with Mike Wilkenson
April 8, 2011
Riverwoods Conference Center, Logan, UT.
Interviewed by: Jennica Sparrow

Name: Mike Wilkenson

Date of Birth:

Place of Birth: Los Angeles, CA

My Dad was a genetic scientist, he did his PhD in Genetics and we traveled quite a bit around the United States as his job changed. So we moved around a lot. I did my high school years in Houston, Texas. I got a music scholarship to USU and moved to USU and went through music and then history and then EE and then computer science. So I moved around a bit

Question: So you didn't start out liking space? Did you like space?

So yeah, when I was a child, I was born the year before they landed on the Moon, so it was a big subject when I was in second grade they were talking about the space Shuttle Program and they were hyping a lot of different designs for the space shuttle some of them look more scientific or science fiction than what they ended up with. But I had a interest in it way back. It wasn't until I got into high school that I decided it was just too much damn work to be an astronaut or anything from my childhood ideas. But I was still very attracted to technology and I did a lot of things like ham radio, things like that.

Question: How did you end up at Utah State?

It was a scholarship and then the GAS Program. I already had some friends and my brother was in the GAS Program so they kind of recruited me.

Question: So how do you switch from music?

Well I was in my junior year in music and I was getting ready to graduate and I was out doing lab schools and things like that and I looked at the starting salary it was about \$18,500.00 and I was like ok that's not going to work out. I had some skills in some more technological areas and after I gave up music I couldn't quite decide where I was going to end up. I did history for a little while and ended up in EE, but it was just too hard. So I ended up in computer science.

Question: When did you join the GAS team?

I can't exactly remember because I was already at USU for a while. After EE I quit for a while and did construction to save up some money and then came back. It might have been around '95. About '95 I think.

Question: Did you continue until you graduated?

Yeah, I did. I was there for G254, G200, G90, and then the first two years of the vomit comet program.

Question: You said that your brother was on the team as well, did he kind of help you get involved.

Yeah, my brother was a computer science student as well. They needed someone to take over one of the experiments that had flown on a previous mission. They wanted to adjust it and send it back up again on G254. So they had asked me and, in fact, the person that did that experiment is now my brother's wife. So I picked up the experiment for her and flew it again on G254.

Question: Were you working with your brother at all?

Not directly. He was involved in different experiments. I did a lot of controller programming so I did a lot of controller programming for other people's experiments and data collection programs stuff like that. In that regard I worked on other experiments.

Question: So who else did you work on the team with?

It was a big team because the space shuttle was very active at the time. We had a lot of cans reserved and we were working on G90 before even G200 when up. There were a lot of people I was working with. There was Ric Rambo, Matt Droter, who is here tonight, Mark Lemon, Casey Hatch, David Hansen, Dan Tebbs, Ragu Tunkur, who was the coordinator when I started, Mike Anderson, Adam Margets(?), and Arlinda Wright, who I flew on the Vomit Comet with. Boy, there were quite a few. Some I don't remember last names for unfortunately. It's been a while.

Question: So you flew on the Vomit Comet, how was the experience?

It was a good experience. For whatever bizarre reason they put us in combat boots. I've never understood a bunch of people jumping around in zero gravity in combat boots. I got kicked in the head pretty good.

Question: Did you vomit at all?

No, neither myself or Arlinda, the one I was doing the experiment with, vomited. They gave us a drug getting onto it. One was, I can't remember the names. But they gave us a drug, it was a depressant and with it they gave us a stimulant. The stimulant kicked in before the anti-vomit and everyone was bouncing off the walls. It got kind of crazy up there for a while. I remember some poor young lady that was just so excited to go, after the first parabola or two she just got so sick that she had to go in the back and sit down and pray for it to be over. We had, I remember for breakfast we were like what wouldn't be so bad to vomit back up and I think we got glazed doughnuts and water. I think that's what we ate before we went up on it. It didn't come back up. We had a great flight, the experiment ran pretty well.

Question: What was the experiment?

It was a vibration and granular materials, they called it the "Sound and Sand." The idea was in a granular material the vibration that goes with it curves away from the pressure density and then by removing gravity from it there is no pressure, pressure gradient so the idea was that sound would travel through it evenly and it did. Unfortunately, the really interesting stuff happened really close to the striker plate where we only had two accelerometers. When we did it the accelerometers were really large and expensive at the time. I remember they were about \$1800.00 bucks at the time. Now you can get them for like \$5.00. So we only had two in the position where the interesting stuff was. So all we could say was yea, it did this, but we can't

say conclusively or draw any formulas from it. So it was going to be run again, but I don't think anyone has ever done anything with it. In fact, I still have the whole binder of it, it was never handed off to anyone as far as I know. It was an interesting experiment.

Question: Did you ever share any of the research? Did you ever go give any presentations or stuff like that?

Yeah as a group, never individually. As a group we did. We also had, I can't remember which one it was I get G200 and G90 confused, but one of them we involved a lot of high school students and so we made presentations to high schools to get them involved and interested in the GAS Program. We did a lot of that and that was fun. To see, get the kids charged up. Especially, as you know, when you are a busy student, it's really hard to dedicate a lot of time to something you have a passion for, but it's neat to see it cultivated in someone else and develop.

Question: So did you have any professor, someone that helped you on the way? Kind of mentored you?

Jan Sojka definitely. Of course Gil Moore. That's kind of unfortunate because in my major there wasn't really anybody. I spent the majority of my time in the Physics building. The people were a lot more interesting then over in the CS Department. Certainly my grades in CS suffered a bit for the GAS Program, but I have no regrets. Totally worth it.

Question: What are you up to now then? How did the GAS program help you get to where you are today? What were some of the skills you learned and how did it help you get where you are today?

That's a good question. I don't know that it directly helped me. I got offered a job at Johnson Space Center. Not offered, I got asked to interview for a job at Johnson Space Center. But at the time I was interested in a girl that had two more years of school left. So I asked her to marry me and I figured if she didn't marry me I would take the job with NASA. Otherwise I would stay in Utah and wait for her to graduate. So that's what happened to me and luckily it worked out for me because that position they had laid off a couple of years afterwards because of budget cuts. So plus we would have been moving back to Texas which I hated. So I ended up still in the technology field doing radio telemetry and packet data and stuff like that in law enforcement. So police cars reporting their information, positions, tickets, stuff like that back to the central system and then coordinating that nationwide, you know as part of the homeland security thing. So I stayed in communication programming, stuff like that. I think where the GAS Program helped was thinking outside of coursework. Problem solving skills, I guess is what I would take out of it.

Question: Did you ever become a mentor? Or did you stick around at all to, I know we have some of the graduate student that kind of push us along, like help us along, did you help that way?

Just new members of the team that would come on and not directly anyone. It was, always when someone new came they would go to whoever had the most knowledge about something to help them out. That really all I ever really did.

Kind of working together, teaching each other. That's what I really like about it a lot. Everyone kind of has a little different major and everyone works together to get a project. That's really cool.

Question: Did you have anything you didn't like about the GAS Program?

Yea, as far as improvements go. The big one was money. We had grand ideas and it was frustrating to know that the technology was out there to solve a problem, but we didn't have enough money to buy something that would solve the problem for us. So we would always have to piece something, "Rube Goldberg" something, together with duct tape and bailing wire and then invariably you didn't do a good enough job and it would fail or something like that. So that was certainly very frustrating. Power was always a big thing, because in the GAS can they would have to sit around for a month or more and when someone flipped a switch it needed to work. So that's not cheap to engineer something like that, but yet we did it cheap. So there were always failures in a can. There was always something always failed, something that didn't go right because we used just substandard junk essentially. So that was frustrating about it.

The other thing was it didn't seem like the school supported it very strongly, the program. There were a few departments, the Physics Department things like that, but as an overall program it just seemed like that they could just again throw more money at it when they had these other grants going around. Granted we were an undergraduate program and I don't think any university takes their undergraduate programs seriously enough. I don't think they see a benefit in it, but we certainly got benefit out of it. So that was a little bit frustrating.

Question: So you didn't go to grad school or anything?

Nope. I got my bachelor just. After changing my major four times I was done with school. I think a combined total of seven years at college. So I was done.

Question: Do you have a favorite memory of the GAS Team? Does anything stand out in your mind of a good time or a favorite project?

There's a lot. There's always good memories and even on the days it was tough, when you're sleeping on the floors to meet a deadline or when the basement flooded and ruined some of our computers. There was a lot of good memories working with the people there. I went on a couple of road trips which I'll never forget.

Question: You went on road trips?

The first one I went on was down to see G254 launched. That was with Matt Droter, Ragu Tunkur, Gil Moore, Casey Hatch, my brother Mark Wilkenson, and myself. We were in two separate vans and we blitzed down from Utah to the Cape. Just remember it being a hell of a night when we rolled in there late and got to see the launch the next day and that was great. But the trip back was awesome because we stopped in Huntsville, saw some museums on the way, went and saw one of the amateur satellites that was getting ready at the satellite assembly facility, went down to the Johnson Space Center in Houston, got to have lunch with John Young who was the last astronaut that got to walk on the Moon. He was an interesting guy. We got to see, at the time it was called the, I think it was the Space Station Freedom before it became the International Space Station, the mock of it that they had there and then we went to see a balloon launching facility. It was suppose to launch, but it was cancelled due to weather but it was neat to see this balloon. It was just enormous, the size of a giant building. So that was a neat trip.

The second trip I went on was down to Johnson to do the Vomit Comet. There was four of us that went down for that. We flew down instead of camping out on the ground, we actually had a hotel. It was kind of nice. What was really neat about it is again, because of weather the Vomit Comet flights were cancelled so we had to stay down there a whole week on the University's nickel just having fun. But we needed the extra time to get our experiment going because there's always last minute things. We got the extra work on it. It worked for us very well by the time, we were pretty confident about it. We were pretty nervous about being in zero G and being able to do the experiment but that wasn't a problem.

Question: Any other road trips?

No just those two. The late nights in the lab, that was fun. They talked tonight about cracking the combinations in thirty minutes or whatever. We did that a lot. They would change the combinations and we would crack the combinations. I remember sticking around late at night. I remember raiding the EE Labs sometimes for electronic parts, begging electronic parts off of them and things like that. Resistors, capacitors I remember blowing chips out by accident and begging equipment from people. Certainly a lot more failures than successes, but the successes were good and the failures colossal.

Question: Do you have any advice for me and member of the team right now?

I guess I would impart that when you get out into the real world after college the grind starts to beat you down don't forget about the creativity that you had in this, bring that into the real world because its monotonous out there. It's not as fun as college, it's easier than college, but it's not as fun. So bring that with you and don't forget what you learned when you were in the program the creativity. The learning process that you developed take that out to the real world and you'll get ahead for sure.

Thank you.